The WOOD DUCK

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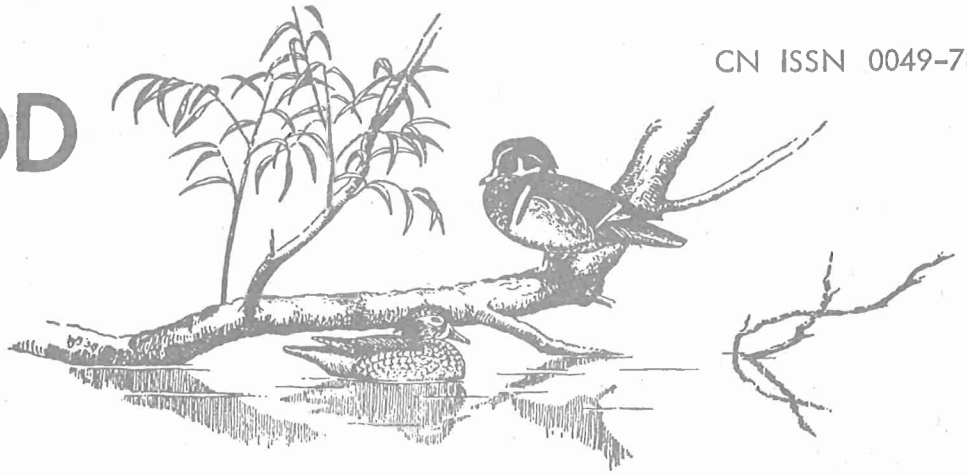

HAMILTON NATURALISTS' CLUB

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Birds of the Feather Band Together

by Carl Rothfels

I could have spent the spring following my first year of university - the first spring in 14 years that I didn't have to spend in school - working to pay for my education, or maybe taking advantage of the two free months to travel, to see distant places. I chose instead to spend my spring as a volunteer at Long Point Bird Observatory (LPBO). "Volunteer?", my friends would ask, "Why don't you get a job?". But they didn't understand.

Long Point is a glorious sandspit, curving far into Lake Erie. It serves as a funnel for migrating birds crossing the Great Lakes, and is one of the most famous birding localities in Ontario. Over 340 species have been documented in the Long Point area, nearly three-quarters of the 467 species known to have ever occurred in Ontario. LPBO is, itself, similarly legendary. Started in 1960, it is the oldest bird observatory in North America. Though known around the world for its migration monitoring, LPBO has other facets as well. It has hosted a Tree Swallow research (TRES) project since the 1970s, is involved with recovery programmes for Ontario Birds at Risk, Breeding Bird Surveys, Project Feederwatch, Loon Monitoring, amongst other activities.

For the migration monitoring programme, LPBO runs three banding stations: the Old Cut station in a residential neighbourhood at the base of the Point; the Breakwater station halfway up the Point; and the Tip station at, well, the tip. Old Cut is the principal station, with a visitor centre and daily banding demonstrations. Breakwater and the Tip don't have phones, and are only accessible by boat.

I spent my first week at Old Cut, becoming familiar with the daily procedure and banding techniques. Then, on the 7th of May, I was sent out to Breakwater, the most primitive of the stations.

It was a big boat trip. Stephane and I had arrived at Old Cut at the same time, and were going to Breakwater to replace two of the volunteers there. Sandy and Dave were also going to Breakwater, but were planning to only stay for the day. Sandy had some bird boxes to install in an attempt to attract Prothonotary warblers and Dave had to pinpoint coordinates for a future breeding bird census.

The four of us were wedged around a propane tank, a propane fridge, a few weeks worth of food (lots of peanut butter), and all our equipment. The boat itself was small enough to turn a trip over even the flattest lake into an exciting adventure. And so we bumped over the waves, squinting into the spray, water running off our full body rain gear, towards Breakwater.

Breakwater is perched at the end of a ridge, with the lake on one side and a large marsh on the other. The land actually belongs to the Long Point Company, a private hunt club which, at one time, owned nearly all of the point. They

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generously allow the LPBO to run a station on their land, but the area is otherwise strictly off-limits to visitors. The habitat on the ridge is unlike anything that I had ever seen; a rolling mixture of oak savannah and slough-like ponds fading into a cattail and phragmites marsh. At first glance I thought that I had arrived at some sort of pasture - between the evenly spaced, knarled oaks, there was no understory, just grasses and small flowering plants.

The lone cabin perches on the highest point at the end of the ridge. Though it is significantly smaller than the average Winnebago, it houses our kitchen, bedroom, storage space, and banding lab. Five big steps could bring you from the doorway to the far wall of the bedroom. One wall is a large pane of windows angled outwards. The sun setting over the marsh, as seen through those windows, has to be one of the most beautiful sights on earth. The windows also make Breakwater a premier storm-watching site. The way that they slope outwards makes the building's hilltop setting even more dramatic, as if it were perched on a cliff overlooking the flat expanse of marsh. And a steady wind is enough to keep the cabin shaking. I kept waiting for a big storm, but none came until two days after I left.

When we arrived, Jukka, Mike, and Paolo - the three volunteers then running the station - were in the middle of the daily routine. In order to make the data it collects more statistically valuable, LPBO has adopted a standard protocol. The mist nets and ground traps are set half an hour before sunrise and are closed six hours later. If the nets were kept up longer, they would catch more birds, but the data thus collected would not be standardized, so it would be less valuable for detecting population trends. Mike and Paolo were busy with the banding, and Jukka was in the middle of another component of the daily protocol: the census, an hour long walk along a specified route, recording all birds seen. The census adds an element to the migration monitoring that the banding often misses. Eagles flying over the marsh, and bitterns calling from the reeds are unlikely to get caught in the nets!

Stephane and I weren't needed to help with the banding, so we went to assist Sandy and Dave. Trudging up the ridge, a motion from the marsh caught our eye. We focused just in time to see the light wing flashes of a Least Bittern as it slid back down into the reeds. Farther along, two Bald Eagles flew over, the immature following hungrily after the fish-laden adult. A Spotted Turtle basked, wedged in a clump of vegetation in one of the sloughs. A Peregrine Falcon perched on an old dead tree. And back at the station, a lonely Piping Plover, one of the most endangered of Ontario's birds, huddled on the sand.

As we worked, the wind picked up, and Dave became more and more anxious. He and Sandy needed to get back to the mainland, and Mike and Paolo were needed at Old Cut. Finally they were ready to leave, and we saw them off. Half an hour later, they returned, dripping wet and slightly shaken. The lake was scary, much too rough for our little boat. Breakwater, which comfortably sleeps 3, must now accommodate 7. I was one of the lucky ones who got a bed; the others were draped on and under the table, the banding lab, and any available spot on the floor. It was a rough night!

The thread which ties the stations together, besides the boats, is the radio. Twice-daily radio calls keep all the stations abreast of each other's birding news, and allow for the arrangement of food orders, boat trips and personnel movements. A five-o'clock (AM!) call confirmed that the morning lake was calm at both ends, so a fatigued and cramped boatload of four headed back to Old Cut, while Jukka, Stephane, and I breathed a sigh of relief and started the day's work.

First order of business was to gulp our requisite cup of coffee. It was cold and windy; weather that was to remain with us for most of our stay. Stephane, a native of France who is completing his Ph.D. on Snow geese at Laval University,

Banding Volunteers Needed

Volunteers are needed tor the Haldimand Bird Observatory. The 1998 spring banding season will soon be here. Volunteers are welcomed and needed at our two field stations.

The Selkirk Provincial Park Station should be up and running on a daily basis, weather permitting, by mid March right through to early June. Camping is available in the park after the beginning of May. Free room and board can be provided for volunteers of one or more weeks duration. Contact John Miles at 1-519-587-5223 or e-mail miles@kwic.com.

The Ruthven Park station near Cayuga should be up and running by mid April until the end of May. Day of operation will depend upon Rick Ludkin's work schedule. Please contact Rick at 1-905-765-4963.

spends his summers in the high arctic and his winters in Quebec City. He assumed that Long Point, in Ontario's banana belt, would be balmy, and neglected to bring his warmest winter gear. It was an oversight that he bitterly (literally and figuratively) regretted. He would often say that he wished that he could return to Ellesmere Island to warm up. With the coffee warming our bellies, pants tucked into socks to protect against ticks, and long underwear keeping our core temperatures up, we started the first net round (check of the nets and traps).

Most of the birds are caught in mist nets - fine mesh nets hung upright on stationary poles. They act like invisible walls of mesh, and catch most birds that fly into them. We also use two types of walk-in traps. Ground traps are the size and shape of a suitcase and are constructed out of a coarse chicken wire. The birds, attracted by the grain placed inside, enter through J-shaped "hallways" on the sides of the traps, but are unable to find their way back out. By reaching in through a trap door in the roof, the bander can capture the birds.

J-traps, the other walk-in-trap, work the same way but are larger. The final trap is the Heligoland trap, or HT. By far the most exciting trap to operate, it is a large funnel-shaped chickenwire contraption, looking like a giant cornucopia lying on its side. The open end is around 30 feet across and 15 feet high. By running towards the trap, while making noise and acting like a bunch of idiots, a pair of banders can drive any nearby birds into the funnel's month. The trap gets narrower and narrower, until the birds fly through a small swinging door and are trapped. HT drives are the way banders get exercise.

We try to do a net round every 15 minutes to ensure that the birds are not exposed for too long, and to prevent us from scaring the birds away by too frequent visits. We remove the birds from the nets (an operation known as "extraction", although I personally think that "extrication" might be more appropriate), and place them in small cloth bags with drawstring tops.

After each net round, we bring the birds to the banding lab. The bird bags from that round are hung on hooks to the bander's left, while a second person, the scribe, sits to the bander's right and is responsible for recording the data. Each bird gets a numbered aluminum band placed on one of its legs, and its vital statistics recorded. Species, wing length, age, sex, amount of fat, weight, time trapped, time banded, bander, trap used - all are recorded on specially designed sheets for later computer entry.

Skilled banders can work at a rate of

Nature: The Spectacular, the Scarce and the Sometimes Secret

by Jim and Jean Stollard

The February 9th Club meeting featured Robert McCaw, a professional nature photographer, who spoke on Nature: The Spectacular, the Scarce and the Sometime Secret.

Robert presented a series of slides which took us across the country and into the States, however, many of the pictures were taken around Southern Ontario in places familiar to most of the audience. There were owls in Burlington and Oakville; deer in Rondeau Provincial Park; Yellow Lady's Slipper on the Bruce Peninsula; Assassin bugs in the flowers in Robert's garden.

All species make use of camouflage to some extent. We were challenged by Robert, several times, to find the hidden subject of a photograph. Perhaps the most successful use of camouflage in the bird world is that of the Woodcock. In several photographs it was impossible to spot the female on the nest even after Robert helpfully pointed her out to us; she just faded away into the mass of leaves and grasses.

With each picture came a titbit of information about the subject. For example, the Purdon Conservation Area, a 50 acre conservation area near Perth, Ontario, has a marvellous display of Showy Lady's Slipper in the last two weeks of June. And while observing a stink bug with a Monarch larva, we learned that the Monarch larva's poison is only skin deep, so the enterprising stink bug was in no danger as he plunged his proboscis deep into the Monarch caterpillar and sucked it dry.

The program ended with a slide presentation, set to music, of "A Day in the Life of the North". As the last wail of the loon died away, we knew that the wonders of nature are very close to us, if only we have the eyes to see.

This Month: Glenn Barrett will take us to the Galapagos Islands.

about one bird per minute, but for most of us mere mortals, it takes longer. Aging and sexing is an art in itself, and adds an entirely new dimension to birding. Most birders are satisfied if they can identify a bird to species, and never consider its age or sex. Many birders have seen hundreds of Blackand White Warblers, for example, without realizing that they could have determined the sex of most of them with relative ease (males have very distinct black and white markings, while the females are grayish and indistinct).

Provided that we weren't forced to shut the nets early due to rain or excessive wind, the last net round ends around 11:30 am. During the afternoon, we keep busy with paper work, domestic chores, much needed naps, and the third component of the migration monitoring: personal observations. Throughout the day we keep track of the birds that we see within the census area, and those observations (obs) are combined with the banding and census results to form the basis for a daily Estimated Total (ET) for each species.

Agreeing on ETs is a regular part of our daily routine. Sitting around the table with the flickering yellow light of the propane lamp lighting the data sheets, we haggle over whether or not the pair of indigo buntings that I saw beside the Heligoland Trap at 10:00 are the same as the pair that Stephane saw by the cabin at 12:00. We realize that what the Observatory is looking for is long term trends, so whether we decide that there were 6 buntings or 8 really doesn't matter. But we haggle anyway.

Neither Jukka nor I have any cooking abilities whatsoever, so Stephane nobly offers to prepare the dinners. Jukka and I are put on dish duty, and spend much of our time at the rugged blue pump beside the cabin. Sitting down to a lovely meal of curry and rice, we habitually clear spots in the fog on the window so that we can obs over the marsh as we eat. We are rewarded as a great egret drifts by before plunging back into the cattails. Then it's ETs and bed.

The days go by quickly. Every morning brings the promise of a big wave of migrants. The wave, however, doesn't come. The spring migration is unusually late, and the temperature is at record breaking lows. We have steady numbers on most days, banding around 30 to 50 birds, but nothing spectacular.

Jukka, having experienced most of the finer migration spots in northern Europe, grows impatient, and starts whining about how there are not any birds around. Stephane and I, looking out over the marsh, can see dozens, and feel like hitting him. But Jukka is not particularly interested in the steady stream of regulars and few rarities that we've been seeing. This is his one chance to become really skilled with aging and sexing North American species. To become truly proficient, he needs to see lots of birds.

It's freezing again. Fortunately, I'm in the bunk above Jukka's, and he gives off waves of heat as he sleeps, so I stay thawed during the night. Stepping outside, though, is a nasty shock, even with my long underwear, winter jacket, and cup of coffee. To make matters worse, I am developing a nasty case of "grackle pox", a painful rash on my knuckles. The theory passed around is that grackles hop around in poison ivy, get the oil on their claws, and when they scratch an unfortunate bander (me) the ivy oil gets left under the skin. There is also the ever present fear of Lyme disease that keeps us alert to any unusual rashes or bites. At least the mosquitoes aren't out yet!

As the morning progresses, it gets warmer, slightly, although the wind remains constant. I'm checking the (empty) nets when I hear Jukka's "rarity whistle" blasting from the area around the cabin. Jukka is a close to a professional birder as one is likely to get. When he goes on birding trips with his Finnish friends, they each wear a whistle to alert each other of rarities and even have a special code describing the significance of the rarity spotted.

After a 200m dash in rubber boots, I find Jukka glued to his scope. Waving to the bushes ahead, he dignifiedly informs me that he's spotted a Blue Grosbeak, a very rare bird for Ontario. He does, however, allow a faint smile to pierce his otherwise unruffled demeanor. The grosbeak, a second year male, hops leisurely along the ground amongst the White-throated Sparrows, comes tantalizingly close to a ground trap, and then flies slowly past the ridge and towards mainland. The day suddenly seems much warmer.

Today I banded five Rose-breasted Grosbeaks in a row. Some birds, like Black and White Warblers, will peck at the bander, but because of their small size, they are unable to inflict much pain. These birds are spunky. Then there are the birds that are obnoxious. They differ from the spunky birds mainly in size, and they don't peck, they chomp. The most obnoxious of the obnoxious is the Rose-breasted Grosbeak - beautiful to behold in a tree, but terrifying to see in a net. They are equiped with a huge bill capable of

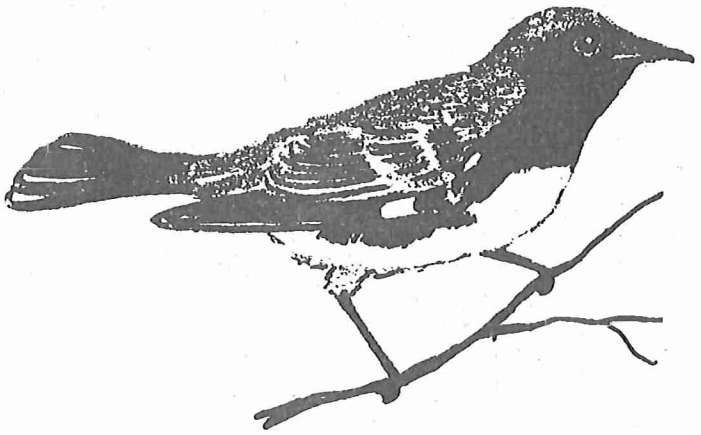
cracking open cherry pits, and are not afraid to use it. Reaching in to the first bag, I felt a searing pain as the grosbeak clamped down on the flesh between my fingers, an area already raw from grackle pox. It's ok, I winced, I can take it. Four birds later,I wasn't so sure. Fortunately, Stephane discovered that if you drape a bird bag over the bird's head as you band it, it will contentedly munch away on the bag and leave your fingers alone. It was a life-saving grosbeak banding innovation.

It was cold and windy again. None of the scattered trees are in leaf yet, and the wind blows right off the lake. But it was also extremely sunny. The wind, cold, and sun combined to make me feel simultaneusly extremely tired yet very alive. I could feel every square inch of my skin; it didn't hurt, but I was unusually conscious of its presence. This must be what it feels like to be a mountain climber. The birds were again uninspirational, but the sun did bring out a surprise: a large Fox Snake. I was on my way to the outhouse when I spotted it basking on the grass by the cottage. At over a metre long, with chocolate blotches on a yellow-brown body, it was a beautiful snake. The sun gleamed off its scales as the wind blew the grasses all around it.

Of course, no description of Breakwater life would be complete without a mention of the legendary Breakwater outhouse. Placed 25 metres from the cabin, but facing away from it, the outhouse is perched on the edge of the same ridge. In order to make outhouse usage as pleasant as possible, a policy has been adopted whereby the door is left open if someone is in the outhouse, and closed if it is not in use. This allows outhouse users to fully enjoy the stunning view over the marsh, and also, of course, allows us to develop large outhouse bird lists. Stephane and I couldn't compete with Jukka's list, at somewhere around 80 species, but I took great pride in the fact that I was the only one to have a Sandhill Crane on my list.

Again, few birds, although the Golden-winged Warbler that we caught in the HT perked everyone up. So as not to suggest that Breakwater, and Long Point in general, are anything less than world class migration monitoring locations, I should mention that the three stations together band around 20 thousand birds every year. This statistic is not only testament to the amount of birds that migrate through the point but also to LPBO's ability to attract volunteers.

The observatory has only two paid staff spread between the three stations, and besides the actual banding, they are also responsible for logistics, supervision, food purchases and staff training. The volunteers come from all over Canada and from around the world. Some of the volunteers when I was there, for example, included Berget from Germany, Jukka from Finland, Larissa from Brazil, Steve from England, Rina from Nova Scotia and Jim from British Columbia. Many are experienced banders wishing to diversify their knowledge at a renowned North American Observatory, while others have little or no birding experience, but are keen to help out and learn more. All are willing to work 6 to 12 hours a day, 7 days a week, for weeks or months at a time, without pay.



Many are attracted to banding by the opportunity to make a contribution to a valuable conservation mechanism. However, the conservational value of banding is contested. Very few of the birds that we band will ever be recovered. Twenty-thousand birds may sound like a lot, but it's just a drop in the bucket of millions that migrate into southern Ontario every spring. In order for the data gained from recovered birds to be really useful there would have to be many times more birds banded.

In Europe, banding has a longer tradition and is much more popular and widespread. There, banding has succeeded in giving ornithologists an excellent picture of the migration patterns for many European song birds. Compared to the European effort, North American banding is in its infancy. But even if retrap data is not yet scientifically significant, banding has other purposes. Its main function is as a component in migration monitoring programmes.

Banding, and the other observations that are built

around it, have allowed LPBO to build nearly 40 years of bird population data. It is only by looking at such long term data that scientists and policy makers can detect trends in bird populations, and adjust their conservation measures correspondingly. And trends have been detected. Many migrants, especially those that are dependent on large forests to breed, have been declining steadily. Others, such as many of those that prefer edge habitats, have shown increases.

A third, and little recognized, benefit of banding is that it gives people more experience with birds. I believe that the more people learn about the natural world, the greater an appreciation they develop, and the more likely they are to support conservation ideals. If more people appreciate Ontario's birds, then more support will be gained for their protection. Banding is an excellent way to increase one's appreciation for and understanding of birds.

Birding can be a very futile and frustrating endeavor, especially for beginners. Seeing a bird in the hand can make the process of getting started as a birder much easier. And it helps experienced birders look further, notice more, and become more familiar with the great variety of birds that can be found in Ontario.

Finally, after a week of slow days, the big wave arrives. By this time (fortunately) we were joined by a fourth volunteer, Jodi. There was always a bander and scribe busy in the cabin, while the other two made continual net runs. Cape May Warblers, Black-throated Blue Warblers, Orange-crowned Warblers, Blue-winged Warblers, Scarlet Tanagers, Indigo Buntings, Rose-breasted Grosbeaks (doh)..... all flocked down the ridge and towards our nets. By the end of six hours of banding, Jukka was definitely smiling. Stephane, Jodi, and I were exhausted.

LPBO is looking for volunteers for its spring and fall seasons. There is no better way to support banding or to resolve your personal ethical objections than by being in the midst of the action. Volunteers staying for a week or less are asked to make a contribution towards the food bill. Long term volunteers get their room and board free. If you're interested in helping out in the migration monitoring program, you should contact Jul Wojnowski at Long Point Bird Observatory/Bird Studies Canada, P.O. Box 160, Port Rowan, ON N0E 1M0, tel: 519-586-3531, fax 519-586-3532.

Bracken - To Eat or Not to Eat

by Pam Watts

In an attempt to further my knowledge of plants, both for myself and for the plant study group, I picked up a book simply called *Ferns* from the public library. It was geared for young readers - perfect, simple language, no Latin mumbo-jumbo. The entire book was very interesting and informative, but the section I found most fascinating was the one on Bracken.

I had come across the term many times in reading, but hadn't realized that it was a fern. According to the book bracken is poisonous and tastes bad. Usually domestic animals will not eat it. This results in overgrazing of non-bracken areas. Control is difficult and expensive. Unfortunately, animals sometimes develop a taste for bracken. If there is nothing else to eat, they are driven by hunger to consume it. Horses die quickly but cattle and sheep do not become ill right away. They develop cancers of the mouth, gullet and stomach from which they die. In Venezula and Costa Rica people who drank milk from bracken-fed cattle also have developed these cancers. In Britain, people are advised not to walk through fields of bracken in late summer when the spores are released into the air. Forestry workers wear masks so as not to breathe in the spores.

When I began looking for additional information on bracken through the field guides, I was surprised to find it in the Peterson *Guide to Edible Plants*. It was listed under Ferns as Bracken, Pasture Brake, *Pteridium aquilinum* - fiddleheads. The information went as follows: "most abundant fern found in dry open sunny spaces, woods, old pastures. Large coarse erect fronds rising singly from longer rootsocks - broadly triangular in outline (1 to 3 ft wide) distinctly 3-forked with numerous leathery oblong leaflets. Fiddleheads shaped like an eagle's claw when unfolding, covered with silver-grey hair. Edible when young fiddleheads (6-8" high) rub off hair. WARNING: cooking recommended." It went on to mention the threat to cattle and the incidence of cancer. So there you have it. The Ostrich fern, also common and abundant, has the delicious and safer fronds if you feel the urge to partake of wild cuisine.

Plant studies, besides being interesting, can provide valuable information. That's a plug to come out and join our plant study meetings. Don't forsake those bird study meetings though, birds are good too. We don't want to ruffle any feathers!

A Threat to Whales
A summary of the 1997 International Whaling Commission meeting

compiled by Brian McHattie, Conservation Director
(from information provided by the International Wildlife Coalition)

The International Whaling Commission's (IWC) 49th Annual Meeting took place in Monaco 20-24 October 1997. Thirty-two member states participated; observers from Canada, Iceland, Italy, Morocco, Portugal and Zimbabwe were also present as were nearly 100 observers representing non-governmental organisations. Note that Canada has chosen not to be a member, so we don't have an official voice at the IWC, even though the government allows aboriginal whaling of bowhead and beluga whales in the Canadian Arctic.

Since the early 1980's there has been a moratorium on whaling, but as you can see whaling by countries such as Japan, Norway, and aboriginal peoples is increasing. See the final paragraph for a concrete step you can take to influence the IWC and world opinion on this matter

Much time was given to the controversial proposal from the United States for a catch limit of 5 gray whales to be taken by the Makah First Nation of Washington state. There was also considerable behind the scenes discussion of a proposal by the Government of Ireland regarding issues fundamental to the future of the IWC and of the whaling issue generally. A number of Member States expressed concern over the increasing level of catches by the two remaining commercial whaling nations, Japan and Norway, despite the existence of the moratorium on commercial whaling. Ireland noted that these catches have risen from 383 in 1992 to 1043 in 1997 as Japan continues "scientific" whaling in the North Pacific and Southern Ocean and Norway continues commercial whaling under its objection to the moratorium decision. These catches are essentially outside of IWC control, will continue and are set to increase.

Forcefully worded resolutions were passed opposing these activities but in the weeks following the IWC meeting both Japan and Norway made it clear that they would, as in previous years, disregard the IWC's requests.

Japanese Scientific Whaling

Following a special Scientific Committee review in May 1997 of Japan's decade-old scientific whaling programme in the Southern Ocean (called JARPA, Japan Research Programme in the Antarctic), the Commission's resolution "affirmed that the JARPA programme does not address critically important research needs for the management of whaling in the Southern Ocean" and, reaffirming its previous request that no scientific whaling take place in sanctuaries, reiterated its deep concern at Japan's continuing scientific programme involving the taking of whales in the Southern Ocean Sanctuary" and strongly urged that the Government of Japan, in the exercise of its sovereign rights, refrain from issuing any further special permit for the take of any whales, particularly in the Southern Ocean Sanctuary."

Nevertheless, the five vessels comprising the Japanese whaling fleet departed for the Antarctic whaling grounds a few weeks later, on Nov. 11.

Norwegian commercial whaling

In the case of Norway's continuing commercial whaling under objection to the moratorium, a resolution was passed calling on Norway to reconsider its objection to the moratorium, halt immediately all whaling activities under its jurisdiction and maintain its existing policy forbidding the export of whale products.

The Norwegian delegation walked out before the vote was taken but returned for the next agenda item. This resolution, similar to the one adopted in 1996, was passed by a vote of 17 to 10 with 3 abstentions.

In its Opening Statement, the Norwegian Government made it clear that it would allow whaling in the future, despite the new IWC resolution. Norway's Minister of Fisheries, Peter Angelsen, announced at the annual meeting of the Norwegian Whalers' Union on December 6 that the Government would allow up to 671 minke whales to be killed in 1998,an increase of nearly 100 animals over the 1997 quota of 580 (503 were actually taken). Norway is applying a carry-over procedure to its new quota, adding 50 whales carried over from previous seasons in which the whalers fell short of the catch limits to a new catch limit of 621.

Japanese small-type coastal whaling

Japan's bid to have the IWC grant an "interim relief allocation" of 50 minke whales to its coastal whalers in the North

Pacific - the tenth such request - was again rejected by the IWC, with a vote of 12 in favour and 16 against (with 4 abstentions), though this is the largest vote in support of Japan's proposal so far.

Gray Whales

The U.S. had done substantial preparation on the proposal for a catch limit of five gray whales to be hunted by the Makah First Nation of Washington State, following its withdrawal of the proposal at the 1996 Annual Meeting. Nevertheless, many delegations continued to express concerns and opposition to the proposal, with the resistance centering around the question of need: to a number of delegations, cultural need alone (the Makah have not been whaling for over 70 years and so are unable to demonstrate a continuing nutritional subsistence need) was an insufficient reason to grant a quota. Note, that First Nations in British Columbia are watching this situation closely and may follow suit.

Faced with continuing opposition, the U.S. merged its request with Russia's request for a renewal of the long-standing quota for gray whales to be taken by the Chukchi people of Siberia. Catch limits have been granted for this take for decades, need has been well-established and the use of part of the whales as food for animals in fur farms is being phased out. The new, joint request lowered the total number of whales that could be taken each year, from 140 to 124 per year, and the U.S. agreed with Russia that the U.S. would take no more than four of these.

Although some delegations were evidently displeased that the two requests had been merged, the proposal eventually went through by consensus with an amendment saying that whales taken under this quota were for "consumption by aborigines whose traditional aboriginal subsistence and cultural needs have been recognised".

The U.S. took the view that, by this decision the IWC had given its support to the Makah proposal. However, following the decision, the Australian delegation took the unusual step of issuing a strongly-worded statement opposing the U.S. interpretation. It argued that although the IWC is not specifically named in the text, it was the sense of the meeting that the only authority to recognise need is the IWC and it had not done so in the case of the Makah.

The hunt would not begin until the spring of 1998, but the differing opinions as to the meaning of the IWC decision are likely to be put before a court in the U.S. for resolution before then.

Minke whales

A Danish proposal to increase Greenland's minke whale catch by 20 animals a year as part of a five year bloc quota was passed by consensus. This catch limit was last increased in 1994, and several countries signalled their intention to review future proposals for increases with more scrutiny.

Bowhead whales

A joint U.S./Russia proposal for 67 bowhead strikes (56 landed) a year over five years was passed by consensus after considerable discussion. For the first time, the Chukchi people of Siberia intend to take five bowhead whales a year, as part of the total 56. Previously only the Inuit of Alaska have taken whales from this stock. *Is this the greatest current threat to whales?*

A group called Breach Marine Protection in the U.K. has organized a petition, known as the 'Popular (Peoples) Resolution on Abolition of Inhumane Commercial Slaughter of Whales' World-Wide. To date, support for the Popular (Peoples) Resolution has been received through signatures to the World-Wide Petition from 113 organisations representing well over 10 million members, from 18 different nations, including both Norway and Japan.

Numerous local, national and international companies, schools, clubs and individuals of all description have also signed this democratic draft People's Resolution, which aims to ban commercial whaling permanently. The Popular (Peoples) Resolution was presented for the first time to International Whaling Commission Secretary, Ray Gambell at the recent IWC meeting in Monaco.

To sign-on to the petition, go to: http://members.aol.com/breachenv/popreslt.html and please, sign-on now!

This legal challenge is designed to bring the United States Governmental Authorities to task for their support of the Makah Indian Tribe's California Gray Whale quota, allegedly authorized by the IWC in Monaco. For more information on anti-whaling efforts, please contact Breach Marine Protection UK 3, St John's Street, Goole, East Yorkshire DN14 5QL UK email: BreachEnv@aol.com. If you would like to become involved in anti-whaling and cteacean freedom issues, please feel free to contact Brian McHattie at 540-1441, or via email at grplanet@interlynx.net.

The Groundnut *(Apios americana)*

by Lyn Hanna-Folkes

I find the botanical writings of Jack Sanders informative and fun to read. They often include poetry, history, geography, light humour and current scientific fact, and for these reasons, I recommend Sanders articles to teachers for classroom material at any level. Although it has been shortened and edited, the following version of an article by Jack Sanders still demonstrates his interesting botany content.

This article contains excerpts from "Sweet from Tip to Toe", originally published in *Wildflower* in the Winter 1991 issue. The material is used with permission. At the time Sanders wrote this article, he was a newspaper editor residing in Ridgefield, Connecticut. If you look up his original version in *Wildflower* magazine, you will find some nice poetry and more history as well.

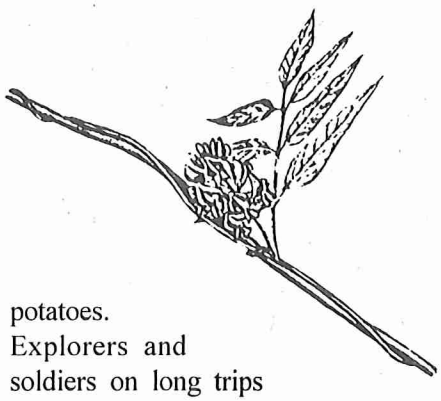
Vines are often ignored by wildflower watchers who look to the ground and not to shrubs or even fences for interesting blossoms. With the groundnut, seeing the flower is sometimes made difficult by the plant itself, but sensing it is easy, thanks to its strong, sweet scent. In fact, the groundnut has been treasured for its sweetness both above and below ground.

In bloom from July through September, the groundnut is a member of the pea family and frequents moist thickets. The vines bear distinctive fronds, consisting usually of two or three pairs of opposite leaves and one end leaf at a right an' 'e to the rest. But the more distinctive feature of the plant is its flower. Blooming in tight clusters of a dozen or two blossoms, they are of an unusual purplish brown, or "chocolate" colour. They look almost good enough to eat, especially after you smell them - the scent is among the strongest and sweetest in our wildflower world. In fact, the flowers are often hidden behind leaves so their existence is frequently betrayed by scent alone.

Tasty Roots

The sweetness doesn't end with the flowers. The tuberous rootstock - from pea to egg-sized lumps linked with big beads on a chain - was cherished by Natives and explorers for its sweet, somewhat nutty taste recalled in its common name. Among many tribes, including Sioux, Delaware and Wampanoags, it was considered an important food and was cultivated at villages. Groundnuts may be eaten raw, boiled, roasted or fried but several authorities say they taste best if you peel and parboil the "nuts" with salt, and then roast them or chop and fry them. The meat should always be eaten while hot; a cold groundnut is said to be as tasty as a wet towel.

Europeans knew of the plant by 1590 when Thomas Hariot, writing about Sir Walter Raleigh's early but successful attempt to establish a colony in Virginia, told of "openask", with its "very good meate". Massachusetts Bay Natives introduced the plant to the Pilgrims, who ate them to help get through that first difficult winter at Plymouth. Early Swedish immigrants in the middle Atlantic colonies were using groundnuts for bread in the 1700s. Once when his potato crop failed, Henry David Thoreau turned to digging up groundnuts and found them quite tasty. Nelson Coon says that for diabetics they make a good substitute for potatoes.



Explorers and soldiers on long trips would find groundnuts hidden in the burrows of field mice, who often collect and store the tubers as winter food. It is said that Raleigh was impressed enough with the groundnut that he brought it back to England as a "potato", though in taste it is often likened to a turnip. Dr. Asa Gray, the noted 19th century botanist, was of the opinion that had civilization started in the New World instead of the Old, the groundnut would have centuries ago been cultivated and developed as a commercial crop and would now be an everyday vegetable. Some American farmers in the past tried cultivating the groundnut but never profitted from growing them. Perhaps that's because the Western palate simply didn't like groundnuts as much as it did other imports from the Americas, such as the true potato and the tomato.

Many names

The plant is also called wild bean - being a relative of our garden beans and producing small edible bean seeds in the fall (Other related plants are also called wild bean). Other folk names include hyacinth bean, Indian potato, pig potato, bog potato, potato bean, white apple, ground pea, trailing pea, and Dakotah potato. French settlers called in pomme de terre or "earth apple".

As for its scientific name - Linnaeus in 1753 named the plant *Glycine apios*- glycine meaning sweet, and apios, Greek for pear, referring to the shape of the tuber. By the 1800s it was being called *Apios tuberosa* by some, including Dr. Gray. By the 1890s it was *Apios apios.* Britton and Brown in 1913 were calling it *Glycine apios* again, but today it is known as *Apios americana*, probably the most suitable of the lot since it is a widespread native. The plant is at home from eastern Canada to Florida and west to Texas and Colorado.

For Your Garden?

Perhaps because its flowers aren't huge, *Apios* species have not been popular with gardeners, except in France during the 19th century. The closely related *wisteria* has fared better. However, groundnut is easy to grow from the tubers transplanted in the spring or from seeds collected in September or October. It needs moist rich soil, a host plant or fence, and not too much sun. Although it does not spread rapidly and overrun an area, it is difficult to eradicate once established, so select planting places with care.

In your garden it may be picked freely to bring its fragrance into the home, but avoid picking it in the wild. While not an endangered species, groundnut is not as common as it once was and should be encouraged to self-sow seeds in its natural habitat.

Groundnut is uncommon in this area having been identified at only six sites according to "The Vascular Plant Flora of the Regional Municipality of Hamilton-Wentworth, Ontario" by Anthony Goodban, Dr. Jim Pringle and Audrey Heagy (1st edition, Sept. 1995).

A Day In The Office

by Glenn Barrett

January 19, 1998. It was not a typical day in the office. Working for the Canadian Wildlife Service in Burlington, I would be hard pressed to define a "typical day in the office", but today was surely not one!

During the morning I was kept busy searching and retrieving data for various research projects we are currently involved in. Just as I was getting ready to break for lunch I received an unusual phone call. The Canadian Wildlife Service office often receives "interesting" calls about everything from how to deter raccoons, squirrels, bats, pigeons, gulls, geese etc., to reports of rare birds, to requests on whether we offer wildlife watching trips.

Today's call though was from a Burlington animal control officer. She reported that a swan was trapped down at the LaSalle Marina. A number of people had called the animal shelter reporting this trapped bird and she had visited the location, confirmed the report, and realized that the animal shelter was ill equipped to perform the rescue.

The bird appeared to be frozen or trapped in some manner at a location by the edge of the floating tire rafts used to moor sailboats. Bird watchers at the site had told the animal control officer that the trapped bird was an immature Trumpeter Swan. Interested, I checked the HNC's Bird Hotline and it reported that four species of swan had been seen at LaSalle on the weekend; Mute, Tundra, Trumpeter, and Whooper!!

Canadian Wildlife Service to the rescue!! Jake Kraft (from the Technical Operations Division , National Water Research Institute) and I launched a boat from the Canada Centre for Inland Waters and motored over to LaSalle Marina. As we were approaching LaSalle, over 20 swans (adults and immatures from various species) took flight. As we arrived it became evident we were not the only ones interested in this bird. Someone must have called the Burlington Fire Department, for in addition to the dozen or so on-lookers there were a half-dozen firefighters along the shoreline watching the trapped swan!!

The rescue itself turned out to be fairly easy. The cygnet had somehow got a piece of yellow nylon rope wrapped around the base of its neck, perhaps while feeding (this rope is used to attach the tires to the lake bottom). Jake maneuvered the boat alongside the swan and I reached over the side and grabbed it by the back of the head and bill. The cygnet was surprisingly calm while I held it close to the boat so that Jake could cut the rope. Once free, the swan paddled serenely away towards the shore and the clapping crowd.

Just another day in the office !!

On the Friday following the rescue I received a call from Bev Kingdon, a Burlington resident who has been involved in monitoring Trumpeter Swans in Hamilton Harbour for the past few winters. She informed me that the trapped cygnet was definitely a Mute Swan, as she had personally seen an adult Mute Swan pecking at the rope that was holding the cygnet in place earlier that Monday morning.

Varied Thrush Visits Kilbride

by J. Christilaw

On Sunday, January 18, 1998, at 8:15 am, my wife and I were part way through breakfast when I noticed what appeared to be a robin at the feeder. To my astonishment, when I focused with my glasses, there was a bird that resembled a robin, but with very different markings. A rapid perusal of the National Geographic Field Guide indicated that we had a Varied Thrush. I never knew my heart rate could accelerate so fast.

The markings were very distinctive. The orange eye-line started at his eye and descended part way down the greyish-blue back of the neck. The whole backside was the same greyish-blue. The orange wing bars looked a bit like a mottling until he turned to give a full side view. The legs and feet were a lighter shade of his breast, and draped on his "robin red breast" was the very distinctive black necklace. This 'necklace' made me think of the Lord Mayor of London with his chain of office bringing to order the Council Meeting. Strangely enough, it was mid-winter, but his vivid colours made me wonder if he was in his spring plumage a bit early. What a magnificient sight he was.

We called the birding hotline to report our visitor, and on Monday after our regular Bird Study Group meeting, the news and the directions to our house were put on the Hamilton hotline and the Internet. Tuesday, we heard it was also on the Toronto hotline.

Tuesday morning before 7:30 a.m. I erected two signs: one on the garage wall, and the second at the viewing site. Then we sat back to wait to see what would happen. *We really didn't know what to expect.* I was hardly back in the house when the first of the birders arrived. During the next ten days over 200 observers made their way to Kilbride, and I think it's safe to say that 180 of them had never heard of Kilbride, much less ever having been there.

Now I know that we birders do travel great distances to get a new "lifer" on our list, but my wife and I never really expected from whence they would come - Flint, Michigan and western Pennsylvania. John Dunn from Dayton, Ohio, had been in Newfoundland, had checked the hotline when he flew into Toronto, and stopped by on his drive back to the U.S. A couple from Buckinghamshire just north of London, England, were in Toronto on a business trip and checked the hotline just out of curiousity. Others were from Windsor, Chatham, London, Long Point, Simcoe, Dunnville, Brantford, Cambridge, Kitchener, Waterloo, Guelph, St. Catharines, Stoney Creek, Hamilton, Ancaster, Burlington, Oakville, Mississauga, Etobicoke, Brampton, Toronto, Ajax, Oshawa, King City and Orangeville. The birders were, as usual, an orderly, well-disciplined, pleasant, appreciative group. We thoroughly enjoyed the ten days we held "open house".

Now back to Mr. Thrush himself. He was a most obliging fellow in that all but 10-12 people had good sightings. He appeared most days about eight or nine times. He would come in out of nowhere, eat for two to four minutes, then retreat to the overhead trees. He would usually stay in view from five to fifteen minutes. He was never aggressive, but would usually stand his ground and feed near the squirrels, Mourning Doves, Tree Sparrows, Juncoes, and the occasional Crow. He always went to the mixed bird seed area. He ignored the Niger seed, the sunflower seed, the suet and the peanuts. To our knowledge, he never went to the heated bird bath. He came in most mornings around 7:30 to 7:45 and stayed until 3:00-3:30 pm. Only on two days did we see him after 4:00 pm.

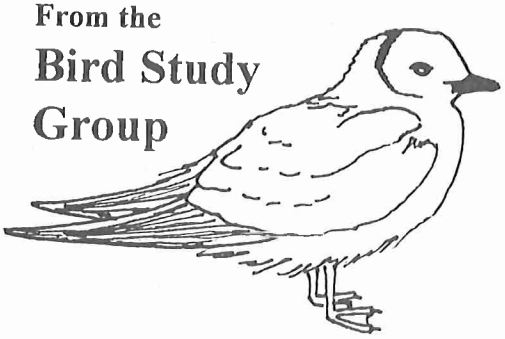
It was a most pleasant, yet exciting encounter. It was also quite a revelation to see the extensive area the hotline and the internet reach. We birders are grateful to Mike Street for his continuing efforts on our behalf with the hotline.

Focus on Hamilton's Natural Environment

The Art Gallery of Hamilton currently features an exhibit on *Hamilton's Natural Environment,* and is hosting two illustrated lectures. The first, on May 7, focuses on Hamilton visionary, Thomas B. McQuesten, who was responsible for the acquisition and establishment of the RBG, Gage Park, and King's Forest Park. The lecture will be given by his biographer, Mr. John Best. On May 21, Dr. Walter Peace will speak on "Landscape Change in the Red Hill Valley". He is the editor of a recently released book on the valley.

Both lectures start at 7 pm at the Art Gallery. The $6 cost includes admission to the gallery exhibits. For more information, call the gallery at (905) 527-6610.

From the Bird Study Group



by Lois Evans

Some 54 people including several newcomers attended the January 19 meeting of the Bird Study Group at the Union Gas auditorium in downtown Hamilton. Sincere apologies are extended to those who could not get into the meeting. Although those who arrived early left it slightly ajar, we didn't realize that the newly-installed sliding door presented a problem to those that followed.

Announcements included a reminder of the Club outing on January 24; a request from Mike Street for volunteers to help monitor the Peregrines which hopefully will nest again this year in downtown Hamilton; and a report from David Wood about the Yellowknife Christmas Count which tallied a record 13 species!

The sightings report conducted by Dennis Lewington revealed that there were a number of "good birds" that had been found around the Hamilton area - the female Peregrine Falcon around the Sheraton Hotel; three Snowy Owls at the Hamilton Airport and another in the vicinity of the Hagersville junkyard; a Northern Saw-whet Owl and Long-eared Owls at Selkirk Provincial Park; an adult male Tufted Duck in Lake Erie near Selkirk; Evening Grosbeaks, Pine Siskins and Common Redpolls at the Long Point Bird Observatory headquarters near St. Williams; a Varied Thrush at a feeder in North Burlington; Tufted Titmice at the RBG Nature Centre feeders; Gray Partridge near Hagersville and Brantford; Eastern Bluebirds on Tapleytown Road; and 21 Sandhill Cranes at Long Point!

Our feature presentation was by long-time member and former Club president, John Miles. John gave a beautifully-illustrated talk about the unique natural history of Selkirk Provincial Park and the bird banding station he has operated there for the past two years. Using slides, mostly of birds in the hand, John then conducted an identification quiz. While most of us struggled to merely identify the bird in question (many of them being of that "confusing fall warbler" genre), John further challenged us to age and sex the bird as well as to give the location where the bird was photographed! Sufficient to say that most of us flunked abysmally. On behalf of John, I extend a thank you to those who contributed to the voluntary collection on behalf of his banding operation. Enough was donated to pay for a wing gauge for use at the station.

To conclude the evening, members of the group were invited to share the experience of their most memorable bird of 1997. Covering a wide range of species, these included sightings in Utah, Arizona, Michigan and Paua New Guinea as well as closer to home.

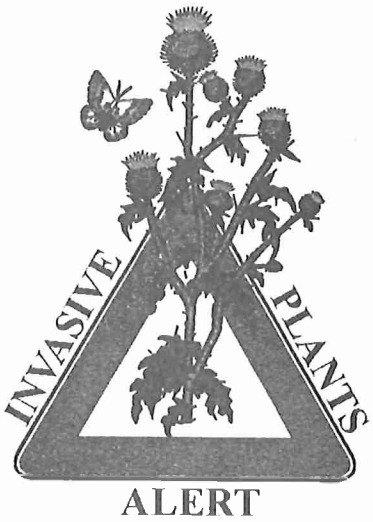
Invasive Plants Survey

The National Botanical Services has launched a program to monitor invasive alien plant species across the country. The Winter 1998 issue of *Nature Alert*, published by the Canadian Nature Federation reports that "The Invasive Plants Alert Survey" will include participants from at least five provinces who will monitor the populations of invasive species in their local areas.

Surveying groups receive background information, including a set of fact sheets which illustrate the invasive species, describe field identification methods, outline the history of these species in Canada, show their location, and evaluate their impacts and control measures.

The monitoring program begins in the spring. The data is reported to the National Botanical Services and subsequently mapped in order to determine the current range of invasives and their potential harmful effects. The volunteer survey is supported by the EPIC program of the Canadian Nature Federation.

For more information about the project, contact Erich Haber at the NBS, 604 Wavell Avenue, Ottawa, Ontario K2A 3A8; phone (613) 722-5523. The survey has a web site at http://www.magi.com/~ehaber/alert.html.



Out of the Past: Coyotes and Small Boys

by R.N. Lowes

Many people like to have things all well labelled and classified. For these, it can be said that the coyote is a member in good standing of the family Canidae which in turn is a member of the order Carnivora. The family Canidae includes such representatives as *Canis aureus* - the golden jackal; *Canis lupis* - the grey wolf; *Canis familiaris* - the 'noble' dog; and *Canis latrans* - the coyote. If you wish to be precise, you pronounce coyote as ki/ot, or ki/ote, but if you wish to use the authentic rural Saskatchewan vernacular, then you must make it ki-yute.

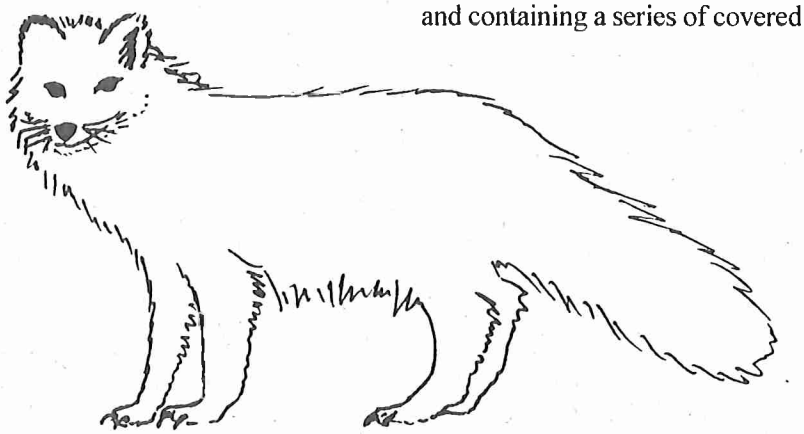
Other people have a love for nature from the standpoint of vital statistics and for these it might be noted that *Canis latrans* lives on a diet comprised of 33% rabbits, 25% carrion, 18% rodents, 13% sheep, plus assorted pine nuts, chokecherries, etc. He mates for life, and with good luck lives for 12 or 13 years. But the fact that a peg-leg coyote - one who has lost a front paw escaping from a steel trap - can still make up 21% of its diet from the fleet-footed white-tailed jackrabbit is such an amazing indication of his mental prowess that he deserves something more than a cool academic portrait. This, then, will be an account of my boyhood association with coyotes, a memory recall of some of the more subtle aspects of coyote personality as they were revealed to me - a freckle-faced, barefoot, prairie boy - away back about 1923.

Perhaps it is the developing of intelligence aided by that healthy curiousity which normal sentient beings possess that universally drives small groups of children into the country every Spring to wade in ponds, overturn stones, play with snakes, frogs, etc. But it is, I think, the impact on the senses of Nature's myriad stimuli that makes susceptible souls develop a love which knows no divorce.

Prairie kids are very fortunate in this respect. We roamed the countryside at all seasons of the year, but particularly in Spring when rural Saskatchewan is full of the varied calls of returning Meadowlarks, Horned Larks, Yellow-headed Blackbirds, etc.; when every grassy slough has its pair of Mallards or pintails, and when the soft warm breezes are redolent of sage, steaming gumbo, drying grass, and a mixture of tantalizing half-recognized aromas. This was the time that I felt most strongly a sympathy and kinship for everything that lived and breathed.

It was on such an expedition that we found our coyote pups - the twenty-fourth of May, a school holiday and a wonderful day for a long hike. Through the big coules and back further into the stony, rolling country bordering an alkali lake, we had come. This was rough land, considered fit only for grazing, and so it was used for sheep farming. It was also considered to be a fine spot to raise a family for as we came over a mound and approached an abandoned gravel pit, a small brown animal on uncertain legs made a headlong dash for the security of its den. Imagine our great good fortune when upon removing a few loose stones from what appeared to be an air hole several feet up the embankment from the main entrance, we uncovered eight rather startled coyote pups apparently enjoying the fresh air from the upper balcony.

A few hours later, several beaming, highly excited boys dumped the entire litter on the living room floor, somewhat to the consternation of my long-suffering mother. Under her guidance we eagerly examined each and every one. Their eyes were open and bright and since they had just begun small ventures away from the den entrance, we assumed that they were about six weeks old. They were heavily parasitized by ticks. Their bellies were plump but their little ribs showed plainly. The process of how to win friends and influence coyotes then began. Each tick was persuaded to let go merely by being tickled with a still glowing match head. Each coyote was cleaned and its sex and general condition duly noted. A wooden framework covered with chicken wire, and containing a series of covered pack-



ing boxes to simulate a den, was constructed at the rear of my father's country store. This became their home and partly mine, too, as I was to spend many a happy hour attending to their needs.

Their simple needs were not much of a problem. Milk, bread, meat scraps, mice and gophers all became grist for the mill. Dry straw made a bed. My attempts to get a measure of confidence, a sign of recognition or a slight display of friendliness were, however, a much more difficult job. They were suspicious, nervous, inclined to stampede to the farthest recesses of their dark box and not above biting like fury.

These were not to be the "hail-fellow-well-met" type of pups with which I was familiar. The ardent affection, the furious tail-wagging, the licking-your-face and chewing-on-your-fingers type of behaviour with which ordinary pups insinuate themselves into your heart was absent here. Rather, the high cheek bones, the slanting enigmatic eyes and the slightly upward tilt of the nose which collectively spell wolf, were to teach me a different type of association. The coyote walks by himself. His desire for freedom from restraint is intense. He is the epitome of all the wildness of the West, of its endless rolling plains, its unceasing winds, its resistance to being easily won.

Still, we reached an accord. I became the organist for the choir. Something in the timbre of the mouth-organ seemed to touch a responsive centre. I would sit among them and begin to play. The effect was touching. Emotion seemed to well up in each wild heart until sophistication was abandoned and inhibitions were destroyed. They would sing! The coyote's voise is not something doleful, a sad requiem that sends shivers down the spines of campers on the Plains. This is merely the effect on unaccustomed ears, previously conditioned by journalistic licence.

The coyote's song is much higher in pitch than that of the wolf. It is a soprano. A single coyote sitting on a hilltop on a frosty moonlit night may begin with a long, clear call, breaking into a violent tremolo, these alternating irregularly. It may begin with a few barks that merge into a wail. In concert, it was clear that "parts" were being sung, the males specializing in the lower register, the barks and sustained howls, the females definitely higher pitched. The performance became a "must" for all commercial travellers, tourists, etc. who passed through our village.

Several escaped. They loved to dig. What then would be more natural than a fine tunnel under the fence to freedom, in the middle of the night, in the best tradition of any prisoner escaping from any prison camp. Unfortunately the guard returned too early, interrupting the operation before all had departed. There was some consolation, however, for one, although free, had been reluctant to leave and was coaxed back home. A partial triumph of kindness and regular meals!

There were many later escapes. Some led to half mile sprints back over the open prairies, a barefoot boy in hot pursuit of a half-grown, knobby-kneed coyote. Others were more hide-and-seek - under lumber piles, weigh scales, etc. Two systems were used on the latter. The escapee could be made to return by a loud rattling of a dinner dish (effective for a quarter of a mile if coyote hungry), or, by plaintively whimpering and whining not far from the hiding place. This latter technique invariably seems to evoke great loneliness and sympathy not only in coyote pups but equally, I have found, with Ontario foxes and most dogs. The little character would emerge feeling very sorry and glad to be back.

There were many, many more experiences outside the limitations of a brief article. There were protests from angry farmers whose chickens had been snatched in broad daylight and before their very eyes. Yet the moment such a farmer went for his gun, the half-tame coyote would disappear at a mere 45 miles per hour. There were little trips back through the coulees, with a coyote on leash, in pursuit of gophers. There were complaints from both children and adults who had presumed too much; bitten fingers were the result. Coyotes acknowledge only a somewhat subservient loyalty to their family or group leader - in this case transferred to a human owner, i.e. me. Best of all, there was the feeling of happiness and pride in eventually having won the trust and affection, if not the total voluntary companionship, of the wildest animal in the West.

With the approach of another Spring a change was due. Higher schooling in another town was to be my destiny. The call of the vacant hills whispered a mandate. From every ravine the sound of rushing water was music in the silence of the prairie night. The scent of freshly ploughed fields, of crocus blooms and, again, of sage hung heavily in the evening air. From closer than usual had come the full-throated song of an enquiring caller. My father said to me, "Boy, I think you better let that coyote go". I did.

This article is reprinted from the March 1960 Wood Duck.

The Value of Protecting Natural Areas Part VI: Reduced Taxes to Local Governments

This is the last instalment of a series prepared by John Struger presenting information from ***Economic Impacts of Protecting Rivers, Trails and Greenway Corridors****, a resource book published by the Rivers, Trails and Conservation Assistance Program of the U.S. National Parks Services (Department of the Interior, 4th edition, 1995). Other parts of the series were published in the March, November and December 1997 and the January and February 1998 issues of the Wood Duck.*

Conservation of greenways, rivers, trails, and natural areas may result in reduced costs to local governments and other public agencies. By conserving a greenway corridor rather than permitting intensive development, local agencies may reduce costs for public services such as sewers, roads, and school facilities. Establishing a greenway in an area prone to hazards, such as flooding, may decrease costs for potential damages. Greenways and associated vegetation can also help control water, air and noise pollution by natural means, resulting in potential decreased pollution control costs. Greenways and trails may promote physical fitness, leading to decreased public health care costs.

The choices between retaining undeveloped lands as open space or allowing residential development must be considered. Expansion of the tax base is not always beneficial in the long term. Expansion almost always results in increased public service requirements. In many situations, the cost of providing these services to residential development is much higher than the revenues to local governments resulting from the expanded tax base.

Urban sprawl is costing a bundle according to a team at Rutgers University in New Jersey. Potential capital costs attributable to sprawl development patterns in the state of New Jersey were cited at $1.3 billion over 20 years for roads, water, sewer, and school facilities. Additional operating and maintenance costs of development reached $400 million annually. Capitalized at current borrowing rates, these numbers translate to a $7-8 billion cost for sprawl over the twenty years from 1992 to 2012.

After researching the economic benefits of open space, the planning department in Duchess County, NY found that farms and other types of open land can actually subsidize local government by generating more in property taxes than the demand for services. Residential lands required $1.12 to $1.36 for every tax dollar contributed, while agricultural and open lands required only $0.21 to $0.48 for every dollar contributed.

According to an American Farmland Trust (1986) study of Loudoun County, Virginia, "over a wide range of development densities...the ongoing public costs of new residential will exceed the (public) revenues from such development". Of those units analysed, annual revenues per thousand dwellings were between $2.7 million and $2.9 million, while costs averaged between $3.5 million and $5 million. The annual net deficit per thousand units ranged from $0.6 million to $2.3 million. The greatest predicted shortfall was for the lowest-density units, termed by the Trust as "rural sprawl". The least shortfall was for medium density development. For all densities, school expenses were the largest proportion of total costs.

In the City of Boulder, Colorado, the 1988 public cost for maintaining non-open space, such as developed acres, was estimated to be over $2,500 per acre, and could be as high as $3,200 per acre when utilities, flood control, transportation, and subsidiary government entities' are included. The cost for maintaining open space in the City was only $75 per acre, or less than 3% the cost of non-open space.

In a study in Culpeper County, Virginia, the average new residential unit can be expected to produce a deficit in the County budget of $1,242. The study addressed the widespread but erroneous perception that residential growth, in expanding the tax base, somehow contributes to local fiscal health. Although residential development results in increased revenues from the real estate tax and other sources, it simultaneously increases demand for public service expenditures and generates the need for expanded public facilities. A companion study concluded that for every dollar of tax revenue collected from residential land uses in 1987, $1.25 was spent on county services. For every dollar collected from industrial/commercial or farm/forest/open space lands, only $0.19 was spent on services.

Use of geologically or environmentally sensitive areas for open space or recreation purposes can reduce potential property damage costs and loss of life. Hazards which can be mitigated through conservation of open space include flooding, slope instability, structural fire damage, and earthquake losses.

The Minnesota Department of Natural Resources computed the average cost to replace an acre-foot of flood water storage to be $300. In other words, if development eliminates an acre of wetland that naturally stores a 12 inch depth of water during a storm, it would cost the public $300 to replace the water storage. The cost to replace 5,000 acres of wetlands lost annually in Minnesota would be $1.5 million.

Leaders in Johnson County, Kansas, expected to spend $120 million on stormwater control projects. Instead, voters passed a $600,000 levy to develop a county-wide streamway park system. Development of a greenways network along streambeds will address some of the County's flooding problems, as well as provide a valuable recreation resource.

It is often argued that in the long run, it would be cheaper for the public to acquire repeatedly damaged structures than to continue to provide funds to repair or rebuild structures in flood-prone locations.

Researchers have found that natural properties of plants and trees help mitigate water, air, and noise pollution. Greenways can maintain and enhance biodiversity of plants and animals and provide a valuable contribution toward pollution control. Pollution can also be decreased by establishing trails and greenways which encourage people to walk or bicycle rather than drive automobiles.

Establishment of a greenway along a river or stream helps maintain water quality because riparian vegetation helps filter out pollutants. Riparian vegetation serves as an effective buffer between a stream and adjacent agricultural area. The retention capabilities of this vegetation prevents many agricultural chemicals from polluting the stream. A study of an agricultural watershed and riparian forest in Maryland found that if the forest was removed there would have been twice as much nitrate lost to the stream.

Riparian habitat within a greenway may also serve to keep water temperatures cool by shading the stream and thereby improve conditions for fisheries. Boulder, Colorado, reduced potential wastewater costs significantly by deciding to restore Boulder Creek rather than construct a nitrification tower. Discharge effluent at the wastewater treatment plant met water quality standards, however, further downstream, ammonia concentrations exceeded the allowable level. Downstream the creek had been previously channelized and degraded. Through revegetation, terracing, construction of aeration structures, and other improvements, the stream was restored. The natural functions of the stream would then cool and re-aerate the water to convert the ammonia. Restoration of the creek also improved habitat for fish and wildlife.

Greenways can also help reduce other adverse impacts of urbanization. Drastic alterations of a ground surface, such as compaction or paving can drastically reduce the infiltration capacity of a surface, which can cause a seroius reduction in groundwater recharge and an increase in runoff.

Greenways help reduce the impacts of noise in two ways. First, greenways, serve to maintain distance between the noise source and the receiver. Secondly, greenways can include planting barriers, such as tree belts and grassy areas that have the natural ability to absorb, deflect, and refract sound.

Greenways also help control air pollution because plants and trees are natural air cleaners. Plants cleanse the air through the process of photosynthesis, which removes carbon dioxide from the air and returns oxygen. Specifically, plants control air pollution through oxygenation and dilution. Oxygenation refers to the introduction of excess oxygen into the atmosphere. The ability of plants to introduce excess oxygen into oxygen deficient air serves to readjust the balance in the area. Plants and trees also act as cleansers by absorbing pollutants directly into their leaves and assimilating them. Vegetation can absorb ozone, sulfur dioxide, carbon monoxide, and airborne particles of heavy metals.

In 1991, trees in the City of Chicago, Illinois (11% tree cover) removed an estimated 17 tons of carbon monoxide, 93 tons of sulfur dioxide, 98 tons of nitrogen dioxide, and 210 tons of ozone. The value of this pollution removal was estimated at $1 million annually.

Recent studies indicate that a single rural tree can intercept up to 50 pounds of particulates per year. In one study, it was determined that planting half a million trees in Tuscon, Arizona would reduce airborne particulates by 6,500 tons per year. The annual value of this pollution

control was estimated to exceed $1.5 million.

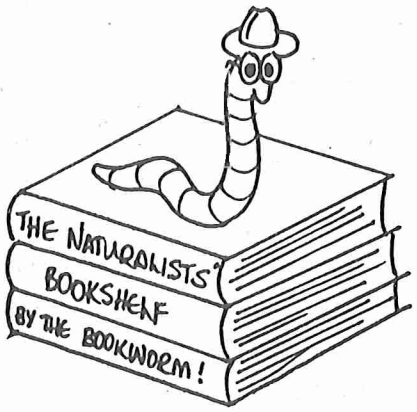
Reductions in pollutant concentrations downwind from parks have been recorded, In one study, reductions in particulate concentration of 19% were recorded in Ohio conifer stands.

Trees in greenways also provide ambient temerature moderation and help reduce heating and cooling costs. Trees reduce winter heating costs by 40% in some cases; and summer shading might provide even greater benefits. A single, isolated tree, generously supplied with water can transpire the energy equivalent of five average room air conditioners running 20 hours per day.

Reduced Community Health Costs

Active use of of a river, trail, or greenway by community residents can help improve their physical fitness and health. Studies have shown that exercise can reduce health care costs. These cost savings may be shared by public health services, employees, and individuals.

For every mile a person walks or runs, they will save society 24 cents in medical and other costs. Recreation activities involving exercise reduce health care costs. People who exercise regularly have 14% lower claims against their medical insurance, spend 30% fewer days in the hospital and have 41% fewer claims greater than $5,000. In 1991, the average American family paid nearly 12% of family income for health care. By the year 2000, families will be paying out over 16%. Exercise derived from recreational activities lessens health related problems and subsequent health care costs. Every year, premature deaths cost American companies an estmated 132 million lost work days at a price tag of $25 billion. Finding and training replacements cost industry $700 million each year. In addition, American businesses lose an estimated $3 billion every year because of employee health problems.



This month's column features two recent re-issues of earlier works which, while undoubtedly familiar to long-time birders, deserve to be made known to the younger birding set.

Back in the December *Wood Duck* mention was made of the reprint edition just released of Roger Tory Peterson's original *A Field Guide to the Birds* (1934). Another of his works has since been republished. Co-authored with Britain's James Fisher, *Wild America* chronicles the 30,000 mile trip around North America that the two undertook in 1953. Starting in Newfoundland, Peterson introduces his friend to the natural history of the continent as they make their way down the Atlantic seaboard, across the southern states, and up the west coast to Alaska. In its entirety it makes for a good read; when read in segments it still provides a good introduction to many of the birding hot spots which are still places of pilgrimage for modern-day birders - Cape St. Mary, the Everglades, Madera Canyon, the Salton Sea, to name but a few. A soft-cover reprint of the original, the new release from Houghton Mifflin, sells for $19.95.

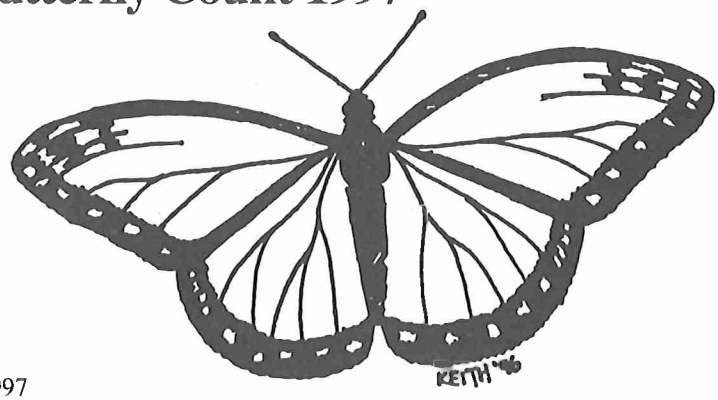
About the same time as the above-mentioned work, another "classic" appeared on the scene. The work of Toronto writer Fred Bodsworth, *The Last of the Curlews* was first published in Britain in 1955. Although a novel, it is based on the documented appearance of two Eskimo Curlew at Galveston, Texas in the mid-1950s. Starting in the frozen tundra of Canada's Arctic, this slim volume chronicles the male's migratory flight to South America, its winter sojourn there, its unquenchable yearnings to find a mate and their springtime flight northward. While this may suggest anthropomorphism to some, the author handles this with consummate skill both as a writer and as a student of ornithology. Bodsworth revised and updated this new edition incorporating more recent ornithological research pertaining to such factors as the mechanics of flight and avian energy consumption. In an epilogue to the new edition, he states that between 1945 and 1986, some 25 sightings of Eskimo Curlew have been documented, some of which have been supported by specimens, which gives slim hope that the species has not yet joined the Ivory-billed Woodpecker and the Passenger Pigeon on the extinct list. While the revised edition (Washington: Counterpoint, 1995, $21.00) is likely more readily available, I still prefer the earlier edition for the many striking black and white illustrations by T.M. Shortt, long-time artist at the Royal Ontario Museum.

Rock Chapel Butterfly Count 1997

by Brian Pomfret

The following article appeared in the January 1998 issue of Ontario Insects. *Brian is a member of the Hamilton Naturalists' Club.*

Two counts in this area were performed in 1997, one on July 12 and the other on July 17. The sites surveyed on July 12 were Rock Chapel (RC), the Berry Tract (BT) and the prairie remnant site along the railroad tracks adjacent to Mercer's Glen (PS). Rock Chapel is located along the Niagara Escarpment and contains a mix of deciduous forest and old field habitats, and wet meadow species and an old orchard characterize the Berry Tract. The North Shore trails area was surveyed on July 17. This area consists of old field habitat along the north shore of Cootes Paradise. Observer effort differed between the two days: eight people spent seven hours searching for butterflies on July 12, while four people spent three hours surveying on July 17.



July 17th, 1997

Common Name	Scientific Name	Total
Black Swallowtail	*Papilio polyxenes*	2
Canadian Tiger Swallowtail	*Pterourus canadensis*	5
Cabbage White	*Pieris rapae*	249
Clouded Sulphur	*Colias philodice*	141
Bronze Copper	*Lycaena hyllus*	1
Pearl Crescent	*Phyciodes tharos*	83
Northern Crescent	*Phyciodes morpheus*	11
Mourning Cloak	*Nymphalis antiopa*	1
Red Admiral	*Vanessa atalanta*	1
Common Wood Nymph	*Cercyonis pegala*	32
Monarch	*Danaus plexippus*	32
Northern Cloudywing	*Thorybes pylades*	1
European Skipper	*Thymelicus lineola*	72

July 12th, 1997

Common Name	Scientific Name	RC	BT	PS	Total
Black Swallowtail	*Papilio polyxenes*	-	1	-	1
Canadian Tiger Swallowtail	*Pterourus canadensis*	8	1	2	11
Cabbage White	*Pieris rapae*	39	10	1	50
Clouded Sulphur	*Colias philodice*	29	2	1	32
Hickory Hairstreak	*Satyrium caryaevorum*	3	1	-	4
White Admiral	*Basilarchia arthemis arthemis*	-	2	-	2
Northern Pearly Eye	*Enodia anthedon*	-	6	-	6
Little Wood Satyr	*Megisto cymela*	2	3	-	5
Common Ringlet	*Coenonympha tullia*	1	-	-	1
Common Wood Nymph	*Cercyonis pegala*	18	10	3	31
Monarch	*Danaus plexippus*	50	1	-	51
European Skipper	*Thymelicus lineola*	158	75	4	237
Long Dash	*Polites mystic*	-	-	1	1
Northern Broken Dash	*Wallengrenia egeremet*	-	-	2	2

MONTHLY MEETINGS

Monday, March 9 8 p.m.
Royal Botanical Gardens Centre
680 Plains Road West, Burlington

Masked Wonders of the Galapagos

Glenn Barrett

Next Month

Monday, April 13 8:00 p.m.
Freshwater Mussels
Janice Smith

Plant Study Group

Next Meeting
Wednesday, March 18 7:30 p.m.
34 Jasmine Street, Hamilton

The Plant Study Group is looking to be informal, interesting and interactive. Meet at Pam's house, 34 Jasmine Street, Hamilton.

Organizer: Pam Watts *388-4482*

Junior Naturalists' Club

Saturday, March 28 - 9:30 am - Noon
Beamer Point Conservation Area

Come See the Raptors!

Do you know that we live near the path of a major spring raptor migration? Beamer Point is a famous place for hawk watching. Bring binoculars if you can (we'll have some extras to borrow). For rides or car pooling call Barb McKean (527-1158 x247) before March 25.

Bird Study Group

Monday, March 16 7:30 p.m.
Canada Centre for Inland Waters
867 Lakeshore Road, Burlington
(under the Skyway Bridge)

This is an informal meeting featuring a discussion of recent bird sightings, an identification session and a workshop, film or set of slides about some aspect of birding. If you are a beginning birder, come out to learn more about birds. If you are an experienced birder, come out to share your knowledge and enthusiasm.

This month: Back to Costa Rica.

Organizer: Lois Evans 545-8171

WANTED

Articles are needed for the Wood Duck. The cupboard is nearly bare. We need material on all subjects.

Let us know about the interesting sightings you have made. Bring to our attention the issues that you believe are important to naturalists and our community.

Please send submissions to **Don McLean, 68-151 Gateshead Crescent, Stoney Creek,Ontario L8G 3W1.** The phone number is (905) 664-8796.

You can also e-mail submissions to: **don.mclean@hwcn.org**.

Deadline for submissions is usually the membership meeting before the issue appears.

UPCOMING EVENTS

March 1 to May 15
NIAGARA PENINSULA HAWK WATCH
At Beamer Memorial Conservation Area on Ridge Road above the escarpment in Grimsby. Counters are on hand daily. If you need help with identification of birds, seek out HNC members for assistance. A south wind produces the better days. Leader: Mike Street 648-3737.

Thursday, March 26
PUBLIC FORUM
The Western Lake Ontario Environmental Coalition presents a public forum on "The Demise of Downtown Hamilton and the Red Hill Expressway". The speaker is Don McLean, chairperson of Friends of Red Hill Valley. Union Gas Auditorium, Main St. and Hughson. 7:30 - 9:30 p.m.

Good Friday, April 10
COME HOME TO RED HILL
Meet at 10 am in the parking lot of Rosedale Arena (south end of Cochrane Road) for what may be the Last Good Friday for Red Hill Valley (expressway construction is scheduled to start this fall). Contact John Struger at 547-5116 for more information.

Need a Ride?

If you need a ride to the Club's Membership Meetings, call any member of the Board who will arrange a ride for you! Members of the Board of Directors, together with their phone numbers, are listed on the back page. Guests are always welcome at our meetings.

HNC Board of Directors 1997-98

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John Hannah	627-1453
Plant Study Group Leader:	
Pam Watts	388-4482
Mailing Co-ordinator:	
Norm Ralston	383-1397
FON Representative:	
Wolfgang Luft	681-2276
Volunteer Coordinator:	
Pierre Arnold	648-2519
Bird Study Group Leader:	
Lois Evans	545-8171
Birding Hotline:	648-9537

HAMILTON NATURALISTS' CLUB

Membership Fees 1997-98

Life Membership	$350.00
Single Membership	25.00
Senior/Student Single Membership	20.00
Senior/Student Joint Membership	25.00
Family Membership	30.00
Junior Naturalists - first child	40.00
Junior Naturalists - additional children	25.00
Honorary Life Member	None

HNC Publications

Hamilton-Wentworth Natural Areas Inventory (2 volumes)	*$60.00*
Reptiles and Amphibians of the Hamilton Area	*20.00*
Checklist of the Birds of Hamilton-Wentworth	*1.00*
Date Guide to Birds of Hamilton-Wentworth	*1.00*
Citizens' Guide to the Protection of the Natural Areas of Hamilton-Wentworth	*Free*
Naturally Hamilton: A Guide to the Green Spaces of Hamilton-Wentworth	*Free*

Wood Duck

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The HNC promotes public interest in the study, conservation and appreciation of our natural heritage. Meetings are held monthly Sept-May inclusive and field events are scheduled throughout the year. The Hamilton Naturalists' Club is a registered charity and all donations as well as membership fees are tax deductible.

Send noteworthy bird records to: Rob Dobos, 1156 5th Conc. Rd. W., R.R. #2 Waterdown, ON L0R 2H2 HNC Home Page: http://www.freenet.hamilton.on.ca/link/hamnature/index.html

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